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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,832

02/18/2004

Benoit Brule

FR-AM1929 NP

3754

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04/30/2008

ARKEMA INC.

PATENT DEPARTMENT - 26TH FLOOR

2000 MARKET STREET

PHILADELPHIA, PA 19103-3222

EXAMINER

WOODWARD, ANA LUCRECIA

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/780,832	Applicant(s) BRULE, BENOIT	
	Examiner Ana L. Woodward	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 11-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 11-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification, as originally filed, fails to provide express support for the “primary” barrier layer newly claimed. Accordingly, since no express support can be found for said term, such is deemed new matter.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,090,459 (Jadamus et al) in view of U.S. 5,376,712 (Nakajima) further in view of U.S. 6,617,377 (Chacko) as per reasons of record.

Jadamus et al disclose multilayer pipes having an inner layer comprising an impact-modified (VESTAMID) polyamide, reading on the presently claimed polyamide/polyolefin blend, and graphite fibrils, reading on the presently claimed carbon nanotubes. In addition to said inner layer, the exemplified multilayered pipes comprise further layers reading on the additional layers per claims 17 and 18 (per Table 1). These pipes are used for the transport of

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(petro)chemical materials and also in the motor vehicle sector for conveying brake, cooling and hydraulic fluid and also fuel, see examples.

Jadamus et al's "impact-modified polyamide" corresponds to the presently claimed polyamide/polyolefin blend. Firstly, the impact modifying materials used to make said impact-modified polyamides include olefin (co)polymers and styrene-based copolymers, e.g., block copolymers of alkenylaromatic compounds with dienes, etc., (column 3, lines 9-22), all of which read on the presently claimed polyolefin component (pages 9-14). Secondly, given that "impact-modified polyamides" constitute *blends* of polyamide and impact modifier (Nakajima, e.g., column 1, lines 7-8, column 2, line 53, column 8, line 68, etc.), it is reasonable to maintain that Jadamus et al's "impact-modified polyamide" are blends of polyamide and polyolefin. Furthermore, as to the claimed polyamide and polyolefin amounts, it is known from Nakajima that impact modified polyamides customarily employ from about 5 to about 50 parts by weight of impact modifier per 100 parts by weight of the polyamide (column 8, lines 24-27). Thus, there is reasonable basis for believing that the "impact modified polyamide" of Jadamus et al would have a similar impact modifier content.

Regarding the claim requirement "wherein said carbon nanotubes concentrate in the polyamide", it is known that polyamides are capable of forming secondary bonding with nanoparticles such as carbon nanotubes (Chacko column 3, lines 60-62, column 4, lines 3 and 48, etc.). Accordingly, one having ordinary skill in the art would have reasonably expected the carbon nanotubes in the reference's polyamide/polyolefin blend (i.e., impact-modified polyamide) to reside in the polyamide matrix due to the secondary bonding between the polyamide and the nanotubes.

As to the herein claimed process, it is maintained that said process, in essence, calls for nothing more than exposing a structure having at least one layer of the claimed polyamide/polyolefin blend to a fuel. The disclosure of the reference meets said process in that the exemplified multilayered pipes comprising an inner layer from the impact-modified polyamide are indeed exposed to fuel, as evidenced by the fuel leakage measurements provided by Table 1. The introductory phrase “a method for improving barrier properties of a structure to alcohol-containing fuels” simply states the result of exposing the structure to fuel and does not serve to patentably distinguish the claimed process from that of Jadamus et al. Even if the reference were not to expressly disclose or recognize said barrier characteristics, its discovery by applicants is tantamount only to finding a property of an old composition. Such recognition does not impart patentability to an otherwise old composition.

The impact-modified (VESTAMID) polyamide and graphite fibrils composition of Jadamus et al constitutes the inner layer of the pipes, that is, said inner layer is in direct contact with the fuel. Accordingly, since said inner layer is in direct contact with the fuel, it follows that it would be the “primary” barrier layer to said fuel.

Regarding claim 14, attention is directed to the additional use of carbon black, a well-known pigment (Table 1).

Response to Arguments

4. Applicant's arguments filed March 31, 2008 have been fully considered but they are not persuasive with respect to Jadamus et al.

Applicants' newly added limitation wherein the layer containing the polyamide/polyolefin blend and carbon nanotubes is described as acting as a “primary barrier

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layer” to alcohol containing fuel, does not lend patentable distinction to the presently claimed subject matter. It is noted, that the plastic pipes of Jadamus et al are also used for conveying methanol-containing or ethanol-containing, i.e., alcohol-containing”, fuel (column 5, lines 30-35). Since the impact-modified (VESTAMID) polyamide and graphite fibrils composition of the reference constitutes the inner layer of said pipes, it would follow that said inner layer, being in direct contact with the fuel, would necessarily act as primary barrier layer to said fuel. Accordingly, it is not seen that applicants’ observations breathes any patentable distinction to the presently claimed subject matter

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ana L. Woodward/

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Primary Examiner
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